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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/797,947

03/11/2004

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12/16/2008

EXAMINER

MAHYERA, TRISTAN J

ART UNIT

PAPER NUMBER

1615

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DELIVERY MODE

12/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/797,947	Applicant(s) UANG, YUH-JYE	
	Examiner TRISTAN J. MAHYERA	Art Unit 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/2/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,7-10,13-18,20-26 and 28-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7-10, 13-18, 20-26 and 28-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

Claims 1, 2, 7-10, 13-18, 20-26 and 28-32 are pending. Claims 3-6 and 11-12 have been canceled. Claims 1, 2, 7-10, 13, 15-18, 20-26 and 28-32 have been amended. Claims 1, 2, 7-10, 13-18, 20-26 and 28-32 are examined on the merits.

Applicant's remarks and amendments

Rejection to claim of Priority

With regard to the rejection of claim priority, Applicant argues that the provisional application 60/454592 supports "catalyst" as used in the instant claims because it describes the application of inorganic salts as a cross linking agent that triggers formation of a gel. This is not found persuasive because catalyst as used in the instant application is a far broader term than inorganic salts used as a cross linking agent that triggers formation of a gel. While such inorganic salts may be a catalyst, the salts do not support the full category of catalysts.

The rejection of the claim to priority for claim 22 for sodium benzoate is hereby **withdrawn** in light of sodium benzoate being used in Example 2 of the priority document.

Art Unit: 1615

Rejection under 103a

Applicant argues that in the present invention the carrageenan has a spherical form, which accumulates into beads allowing the gel to accommodate the curves of a limb. It is pointed out to applicant that the claims of the invention do not state any of these limitations. The claims merely state a gel forming agent in claim 1, which can be forms of carrageenan in dependant claims 7-9, both of which Bianco reads on.

Applicant argues that the present invention uses inorganic salts as a catalyst to stiffen the carrageenan gum for printing, which is not shown in Bianco. This is not found persuasive because Bianco uses inorganic salts such as alkali metal salts and alkaline earth metal salts (see e.g. col. 4 lines 1-16), furthermore, although Bianco does not state that the salts will stiffen the carrageenan "[p]roducts of identical chemical composition can not have mutually exclusive properties.' A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present, such as being a catalyst. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990)." See MPEP 2112.01.

Applicant argues that the instant invention does not use poly-vinyl alcohol as an ingredient although it is used in Bianco, however, as applicant's claims use the transitional phrase "comprising" the addition of components such as the poly vinyl alcohol to the instant invention would neither take away from the spirit of what the invention claims nor would the alcohol be in any way excluded, thus the rejection stands.

Art Unit: 1615

Applicant argues that sorbitol in the instant invention is used in a manner divergent from Bianco, specifically, without combination, reaction, or esterification into polyols. This is not found persuasive because the Examiner reads Bianco as merely suggesting in a preferred embodiment that the surfactant is based on a non-toxic polyol, preferably sorbitol. Bianco states in claim 41 that the “surfactant is based on one of sorbitan and sorbitol”. Claim 41 depends from claim 35 which states a “surfactant in an amount between about 0.5 and 4 weight percent”. There is no indication when taking claims 35 and 41 together that sorbitol alone as the base was not envisaged. This is further bolstered by claim 42, which depends not from 41 but from 35 and states that “the surfactant is based on a base sugar compound which is either etherified with a fatty acid or etherified with a fatty alcohol”. This demonstrates that the etherified form of sorbitol is a separate embodiment of Bianco.

Applicant argues that the child attractive features include glitter, which is not disclosed in Bianco. This is not found persuasive because Bianco discusses the use of “sparkle[s]”, which is the same as the glitter in the instant. See e.g. claim 14.

In response to applicant's arguments against the references individually (specifically Shapero and Norton on pages 8-10), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Therefore applicant's arguments are rendered moot and the rejections stand.

Priority

Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

The later-filed application must be an application for a patent for an invention, which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 60/454592, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. Claims 1, 9, 10, 11, 12 and 31 refer to a catalyst. Claims 18 and 19 refer to a buffer. Claim 25 refers to elongation longer than 1100%. No support is found for the above mentioned claims in priority Application No. 60/454592. The effective filing date for the above mentioned claims is set at 03/11/2004.

Claim Objections

The objection of Claims 1 and 4 has been **withdrawn** because the claims were amended and cancelled respectively.

Claim Rejections - 35 USC § 112 2nd Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The rejection of Claims 23, 24 and 30 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is hereby **withdrawn** in light of applicant's amendments.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-31 **remain** rejected under 35 U.S.C. 103(a) as being unpatentable over BIANCO et al. (US 6,348,534 – see PTO-1449) in view of SHAPERO et al. (US 5,310,421 – see PTO-892) and MERCK (The Merck Index, see PTO-892) and SMITH et al. (Effects of Freezing point of Carbohydrates Commonly used in Frozen Desserts, see PTO-892).

BIANCO teaches an aqueous play gel in a container for use by children. BIANCO teaches the gel contains water. See e.g. Example 1; instant claim 1. The gel is a polyvinyl alcohol. See e.g. Example 1; instant claim 1. The gel is in a container. See e.g. Example 3; instant claim 1. The reference teaches the use of a salt, including alkali metal salts and alkaline earth salts, preferably potassium chloride. See e.g. col 4 lines 1-16; instant claim 1. The reference includes sorbitol as a surfactant; however, antifreeze is an inherent property of sorbitol. See e.g. col 3 lines 31-38 and MERCK “sorbitol” Compound No. 8873; instant claims 1-3. Additional sweeteners are taught, specifically, sucrose, lactose, maltose, glucose all of which are known to inherently affect the freezing point of a composition. See e.g. col 3 lines 33-36 and SMITH page 2466 Table 2; instant claims 2, 4 and 5. The reference further includes base sugars such as dextrose, maltose, fructose, glucose and combinations of these (i.e. corn syrup of various D.E.). See e.g. col 3 lines 34-35 and SMITH page 2466 Table 2; instant claims 4 and 5. BIANCO further teaches alkali metal phosphates as surfactants, of which dipotassium phosphate is known as a buffer in antifreeze solutions (see MERCK “dipotassium phosphate” Compound No. 7828); instant claims 18 and 19. The reference teaches colorants and preservatives. See e.g. claim 8 and col 4 line 55;

Art Unit: 1615

instant claims 20-21 and 27. Sodium benzoate is a common non-toxic food grade preservative. See e.g. MERCK "sodium benzoate" Compound No. 8725; instant claim 22. Mineral oil is taught by BIANCO. See e.g. col 4 line 56; instant claim 23. The composition is extremely flexible and designed for children. See e.g. col 1 line 51; instant claims 24 and 25. The composition can glow in the dark. See e.g. col 1 line 58; instant claim 28. Different colors and printing such as fluorescence, iridescence, pearlescence, metallic appearance and sparkles are all taught by BIANCO. See e.g. col 1 lines 55-61 and claim 14; instant claims 29 and 30.

While BIANCO does not explicitly teach all the instant claimed percentages, it is the position of the Examiner that it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine suitable percentages through routine or manipulative experimentation to obtain the best possible results, as these are variable parameters attainable within the art, specifically to determine the optimal freezing point temperature by adjusting the percent of antifreeze in the gel; instant claims 6 and 31.

Moreover, generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456; 105 USPQ 233, 235 (CCPA 1955). Applicants have not demonstrated any unexpected or unusual results, which accrue from the instant percentage ranges.

BIANCO does not explicitly teach a gel that is cross-linked or potassium chloride.

SHAPERO teaches a play material formed using a self cross-linking sodium alginate to make a gel. SHAPERO teaches a gel formed from cross-linked sodium alginate, salt and water. See e.g. Table 1, col 4 lines 16-17; instant claims 7 and 13-15. The gel is taught to contain 2.5% to 4.0% sodium alginate. See e.g. col 4 line 16; instant claim 8. The salt used by SHAPERO in the catalytic formation of the sodium alginate gel is sodium chloride. See e.g. Table 1 line 22; instant claim 9 and 11. The sodium chloride is taught from 2.0% to 7.0%. See e.g. Table 1 line 22; instant claim 10. While SHAPERO does not use potassium chloride, a person skilled in polymer gels at the time of the invention would know that any salt of an alkali metal, specifically potassium chloride or sodium chloride or a alkaline earth metal salt, specifically calcium chloride or magnesium chloride, would suffice in the formation of an alginate gel; instant claims 12, 16 and 17.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to make a toy or medical composition comprising sorbitol used as a antifreeze agent, a salt used as a catalyst, colors, gelling agent and cross-linking gel within a container, as taught by BIANCO in view of SHAPERO. One of ordinary skill in the art at the time the invention was made would have been motivated to combine these elements into a single composition because of the beneficial effects of using a safe and non-toxic gel, specifically cross-linked sodium alginate, around children as taught by SHAPERO. See e.g. SHAPERO col 3 lines 1-7. Furthermore, the antifreeze agent would prevent injury to children by keeping the toy soft and malleable in clod

Art Unit: 1615

temperatures, instead of hard and potentially dangerous to a child's eye or body. Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention.

Claim 32 **remains** rejected under 35 U.S.C. 103(a) as being unpatentable over BIANCO et al. (US 6,348,543 – see PTO-1449) in view of SHAPERO et al. (US 5,310,421 – see PTO-1449) and in view of NORTON et al. (US 5,002,934 – see PTO-892).

BIANCO and SHAPERO teach toys for children containing a gel in a container, as described above.

BIANCO and SHAPERO do not teach the use of carrageenan gum as the gelling agent.

NORTON teaches the use of carrageenan gum in an aqueous gel composition. See e.g. col 3 lines 12-16; instant claim 32. The carrageenan gum is present from about 0.5 to 5.0% by weight, specifically about 1.5%. See e.g. claim 8 and Table 2 wherein the carrageenan is present at 1.5%; instant claim 32.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to make a composition comprising containing carrageenan gum as the gelling agent, sorbitol as the antifreeze, potassium chloride and a colorant, as taught by BIANCO in view of SHAPERO in view of NORTON. One of ordinary skill in the art at the time the invention was made would have been motivated to combine these elements into a single composition because carrageenan gum is non-toxic and safe for

Art Unit: 1615

consumption in the food industry, making it beneficial to use in toys or medical devices where toxic gels are disfavored, as taught by NORTON and SHAPERO. Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention.

Conclusion

No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **TRISTAN J. MAHYERA** whose telephone number is

Art Unit: 1615

571-270-1562. The examiner can normally be reached on Monday through Friday 9am-7pm EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL P. WOODWARD can be reached on 571-272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tristan J Mahyera/
Examiner, Art Unit 1615

/MP WOODWARD/
Supervisory Patent Examiner, Art Unit 1615